

that several transmitters use one channel for sending several bit streams.

*Time division multiplexing (TDM).* A multiplexing technique whereby two or more channels are derived from a transmission medium by dividing access to the medium into sequential intervals. Each channel has access to the entire bandwidth of the medium during its interval. This implies that one transmitter uses one channel to send several bit streams of information.

*Unattended operation.* Operation of a station by automatic means whereby the transmitter is turned on and off and performs its functions without attention by a designated person.

*Universal Licensing System.* The Universal Licensing System (ULS) is the consolidated database, application filing system, and processing system for all Wireless Radio Services. ULS supports electronic filing of all applications and related documents by applicants and licensees in the Wireless Radio Services, and provides public access to licensing information.

*Upper Band Segment (UBS).* Segment of the BRS/EBS band consisting of channels in the frequencies 2614–2690 MHz

*Wireless communications service.* A radiocommunication service licensed pursuant to this part for the frequency bands specified in § 27.5.

[62 FR 9658, Mar. 3, 1997, as amended at 62 FR 16497, Apr. 7, 1997; 63 FR 68954, Dec. 14, 1998; 65 FR 3145, Jan. 20, 2000; 65 FR 17602, Apr. 4, 2000; 67 FR 41854, June 20, 2002; 68 FR 66286, Nov. 25, 2003; 69 FR 5714, Feb. 6, 2004; 69 FR 72031, Dec. 10, 2004]

#### § 27.5 Frequencies.

(a) *2305–2320 MHz and 2345–2360 MHz bands.* The following frequencies are available for WCS in the 2305–2320 MHz and 2345–2360 MHz bands:

(1) Two paired channel blocks are available for assignment on a Major Economic Area basis as follows:

Block A: 2305–2310 and 2350–2355 MHz; and  
Block B: 2310–2315 and 2355–2360 MHz.

(2) Two unpaired channel blocks are available for assignment on a Regional Economic Area Grouping basis as follows:

Block C: 2315–2320 MHz; and  
Block D: 2345–2350 MHz.

(b) *746–764 MHz and 776–794 MHz bands.* The following frequencies are available for licensing pursuant to this part in the 746–764 MHz and 776–794 MHz bands:

(1) Two paired channels of 1 megahertz each are available for assignment solely to Guard band managers. Block A: 746–747 MHz and 776–777 MHz.

(2) Two paired channels of 2 megahertz each are available for assignment solely to Guard band managers. Block B: 762–764 MHz and 792–794 MHz.

(3) Two paired channels of 5 megahertz each are available for assignment. Block C: 747–752 MHz and 777–782 MHz.

(4) Two paired channels of 10 megahertz each are available for assignment. Block D: 752–762 MHz and 782–792 MHz.

(c) *698–746 MHz band.* The following frequencies are available for licensing pursuant to this part in the 698–746 MHz band:

(1) Three paired channel blocks of 12 megahertz each are available for assignment as follows:

Block A: 698–704 MHz and 728–734 MHz;  
Block B: 704–710 MHz and 734–740 MHz; and  
Block C: 710–716 MHz and 740–746 MHz.

(2) Two unpaired channel blocks of 6 megahertz each are available for assignment as follows:

Block D: 716–722 MHz; and  
Block E: 722–728 MHz.

(d) *1390–1392 MHz band.* The 1390–1392 MHz band is available for assignment on a Major Economic Area basis.

(e) *The paired 1392–1395 and 1432–1435 MHz bands.* The paired 1392–1395 MHz and 1432–1435 MHz bands are available for assignment on an Economic Area Grouping basis as follows: Block A: 1392–1393.5 MHz and 1432–1433.5 MHz; and Block B: 1393.5–1395 MHz and 1433.5–1435 MHz.

(f) *1670–1675 MHz band.* The 1670–1675 MHz band is available for assignment on a nationwide basis.

(g) [Reserved]

(h) *1710–1755 MHz and 2110–2155 MHz bands.* The following frequencies are available for licensing pursuant to this part in the 1710–1755 MHz and 2110–2155 MHz bands:

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(1) Two paired channel blocks of 10 megahertz each are available for assignment as follows:

Block A: 1710–1720 MHz and 2110–2120 MHz;  
and

Block B: 1720–1730 MHz and 2120–2130 MHz.

(2) Two paired channel blocks of 5 megahertz each are available for assignment as follows:

Block C: 1730–1735 MHz and 2130–2135 MHz;  
and

Block D: 1735–1740 MHz and 2135–2140 MHz.

(3) One paired channel block of 15 megahertz each is available for assignment as follows:

Block E: 1740–1755 MHz and 2140–2155 MHz.

(i) *Frequency assignments for the BRS/ EBS band.*

(1) Pre-transition frequency assignments.

BRS Channel 1: 2150–2156 MHz  
BRS Channel 2: 2156–2162 MHz  
BRS Channel 2A: 2156–2160 MHz  
EBS Channel A1: 2500–2506 MHz  
EBS Channel B1: 2506–2512 MHz  
EBS Channel A2: 2512–2518 MHz  
EBS Channel B2: 2518–2524 MHz  
EBS Channel A3: 2524–2530 MHz  
EBS Channel B3: 2530–2536 MHz  
EBS Channel A4: 2536–2542 MHz  
EBS Channel B4: 2542–2548 MHz  
EBS Channel C1: 2548–2554 MHz  
EBS Channel D1: 2554–2560 MHz  
EBS Channel C2: 2560–2566 MHz  
EBS Channel D2: 2566–2572 MHz  
EBS Channel C3: 2572–2578 MHz  
EBS Channel D3: 2578–2584 MHz  
EBS Channel C4: 2584–2590 MHz  
EBS Channel D4: 2590–2596 MHz  
BRS Channel E1: 2596–2602 MHz  
BRS Channel F1: 2602–2608 MHz  
BRS Channel E2: 2608–2614 MHz  
BRS Channel F2: 2614–2620 MHz  
BRS Channel E3: 2620–2626 MHz  
BRS Channel F3: 2626–2632 MHz  
BRS Channel E4: 2632–2638 MHz  
BRS Channel F4: 2638–2644 MHz  
EBS Channel G1: 2644–2650 MHz  
BRS Channel H1: 2650–2656 MHz  
EBS Channel G1: 2656–2662 MHz  
BRS Channel H1: 2662–2668 MHz  
EBS Channel G1: 2668–2674 MHz  
BRS Channel H1: 2674–2680 MHz  
EBS Channel G1: 2680–2686 MHz  
I Channels: 2686–2690 MHz

(2) *Post transition frequency assignments.* The frequencies available in the Broadband Radio Service (BRS) and Educational Broadband Service (EBS) are listed in this section in accordance

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with the frequency allocations table of § 2.106 of this chapter.

(i) Lower Band Segment (LBS): The following channels shall constitute the Lower Band Segment:

BRS Channel 1: 2496–2502 MHz  
EBS Channel A1: 2502–2507.5 MHz  
EBS Channel A2: 2507.5–2513 MHz  
EBS Channel A3: 2513–2518.5 MHz  
EBS Channel B1: 2518.5–2524 MHz  
EBS Channel B2: 2524–2529.5 MHz  
EBS Channel B3: 2529.5–2535 MHz  
EBS Channel C1: 2535–2540.5 MHz  
EBS Channel C2: 2540.5–2546 MHz  
EBS Channel C3: 2546–2551.5 MHz  
EBS Channel D1: 2551.5–2557 MHz  
EBS Channel D2: 2557–2562.5 MHz  
EBS Channel D3: 2562.5–2568 MHz  
EBS Channel JA1: 2568.00000–2568.33333 MHz  
EBS Channel JA2: 2568.33333–2568.66666 MHz  
EBS Channel JA3: 2568.66666–2569.00000 MHz  
EBS Channel JB1: 2569.00000–2569.33333 MHz  
EBS Channel JB2: 2569.33333–2569.66666 MHz  
EBS Channel JB3: 2569.66666–2570.00000 MHz  
EBS Channel JC1: 2570.00000–2570.33333 MHz  
EBS Channel JC2: 2570.33333–2570.66666 MHz  
EBS Channel JC3: 2570.66666–2571.00000 MHz  
EBS Channel JD1: 2571.00000–2571.33333 MHz  
EBS Channel JD2: 2571.33333–2571.66666 MHz  
EBS Channel JD3: 2571.66666–2572.00000 MHz

(ii) Middle Band Segment (MBS): The following channels shall constitute the Middle Band Segment:

EBS Channel A4: 2572–2578 MHz  
EBS Channel B4: 2578–2584 MHz  
EBS Channel C4: 2584–2590 MHz  
EBS Channel D4: 2590–2596 MHz  
EBS Channel G4: 2596–2602 MHz  
BRS Channel F4: 2602–2608 MHz  
BRS Channel E4: 2608–2614 MHz

(iii) Upper Band Segment (UBS): The following channels shall constitute the Upper Band Segment:

BRS Channel KH1: 2614.00000–2614.33333 MHz  
BRS Channel KH2: 2614.33333–2614.66666 MHz  
BRS Channel KH3: 2614.66666–2615.00000 MHz  
EBS Channel KG1: 2615.00000–2615.33333 MHz  
EBS Channel KG2: 2615.33333–2616.66666 MHz  
EBS Channel KG3: 2616.66666–2617.00000 MHz  
BRS Channel KF1: 2616.00000–2616.33333 MHz  
BRS Channel KF2: 2616.33333–2616.66666 MHz  
BRS Channel KF3: 2616.66666–2617.00000 MHz  
BRS Channel KE1: 2617.00000–2617.33333 MHz  
BRS Channel KE2: 2617.33333–2617.66666 MHz  
BRS Channel KE3: 2617.66666–2618.00000 MHz  
BRS Channel 2: 2618–2624 MHz  
BRS Channel E1: 2624–2629.5 MHz  
BRS Channel E2: 2629.5–2635 MHz  
BRS Channel E3: 2635–2640.5 MHz  
EBS Channel F1: 2640.5–2646 MHz  
EBS Channel F2: 2646–2651.5 MHz  
EBS Channel F3: 2651.5–2657 MHz  
BRS Channel H1: 2657–2662.5 MHz

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BRS Channel H2: 2662.5–2668 MHz  
BRS Channel H3: 2668–2673.5 MHz  
BRS Channel G1: 2673.5–2679 MHz  
BRS Channel G2: 2679–2684.5 MHz  
BRS Channel G3: 2684.5–2690 MHz

Note to paragraph (i)(2): No 125 kHz channels are provided for channels in operation in this service. The 125 kHz channels previously associated with these channels have been reallocated to Channel H3 in the upper band segment.

(3) Frequencies will be assigned as follows:

(i) An EBS licensee is limited to the assignment of no more than one 6 MHz channel in the MBS and three channels in the LBS or UBS for use in a single area of operation. Applicants shall not apply for more channels than they intend to construct within a reasonable time, simply for the purpose of reserving additional channels. The number of channels authorized to an applicant will be based on the demonstration of need for the number of channels requested. The Commission will take into consideration such factors as the amount of use of any currently assigned channels and the amount of proposed use of each channel requested, the amount of, and justification for, any repetition in the schedules, and the overall demand and availability of broadband channels in the community. For those applicant organizations formed for the purpose of serving accredited institutional or governmental organizations, evaluation of the need will only consider service to those specified receive sites which submitted supporting documentation.

(ii) An applicant leasing excess capacity and proposing a schedule which complies in all respects with the requirements of § 1.9047 will have presumptively demonstrated need for no more than four channels. This presumption is rebuttable by demonstrating that the application does not propose to comport with our educational usage requirements as defined in § 27.1203, and to transmit the requisite minimum educational usage of § 1.9047 of this chapter for genuinely educational purposes.

(4) A temporary fixed broadband station may use any available broadband channel on a secondary basis, except

that operation of temporary fixed broadband stations is not allowed within 56.3 km (35 miles) of Canada.

(5)(i) A point-to-point EBS station on the E and F-channel frequencies, may be involuntarily displaced by a BRS applicant or licensee, provided that suitable alternative spectrum is available and that the BRS entity bears the expenses of the migration. Suitability of spectrum will be determined on a case-by-base basis; at a minimum, the alternative spectrum must be licensable by broadband operators on a primary basis (although it need not be specifically allocated to the broadband service), and must provide a signal that is equivalent to the prior signal in picture quality and reliability, unless the broadband licensee will accept an inferior signal. Potential expansion of the BRS licensee may be considered in determining whether alternative available spectrum is suitable.

(ii) If suitable alternative spectrum is located pursuant to paragraph (h)(6)(i) of this section, the initiating party must prepare and file the appropriate application for the new spectrum, and must simultaneously serve a copy of the application on the EBS licensee to be moved. The initiating party will be responsible for all costs connected with the migration, including purchasing, testing and installing new equipment, labor costs, reconfiguration of existing equipment, administrative costs, legal and engineering expenses necessary to prepare and file the migration application, and other reasonable documented costs. The initiating party must secure a bond or establish an escrow account to cover reasonable incremental increase in ongoing expenses that may fall upon the migrated licensee. The bond or escrow account should also account for the possibility that the initiating party subsequently becomes bankrupt. If it becomes necessary for the Commission to assess the sufficiency of a bond or escrow amount, it will take into account such factors as projected incremental increase in electricity or maintenance expenses, or relocation expenses, as relevant in each case.

(iii) The EBS licensee to be moved will have a 60-day period in which to oppose the involuntary migration. The

broadband party should state its opposition to the migration with specificity, including engineering and other challenges, and a comparison of the present site and the proposed new site. If involuntary migration is granted, the new facilities must be operational before the initiating party will be permitted to begin its new or modified operations. The migration must not disrupt the broadband licensee's provision of service, and the broadband licensee has the right to inspect the construction or installation work.

[62 FR 9658, Mar. 3, 1997, as amended at 65 FR 3145, Jan. 20, 2000; 65 FR 17602, Apr. 4, 2000; 67 FR 5510, Feb. 6, 2002; 67 FR 41854, June 20, 2002; 69 FR 5714, Feb. 6, 2004; 69 FR 72032, Dec. 10, 2004; 69 FR 77950, Dec. 29, 2004]

#### § 27.6 Service areas.

(a) WCS service areas are Major Economic Areas (MEAs) and Regional Economic Area Groupings (REAGs) as defined in the Table immediately fol-

lowing paragraph (a)(1) of this section. Both MEAs and REAGs are based on the U.S. Department of Commerce's 172 Economic Areas (Eas). See 60 FR 13114 (March 10, 1995). In addition, the Commission shall separately license Guam and the Northern Mariana Islands, Puerto Rico and the United States Virgin Islands, American Samoa, and the Gulf of Mexico, which have been assigned Commission-created EA numbers 173–176, respectively. Maps of the EAs, MEAs, and REAGs and the FEDERAL REGISTER Notice that established the 172 EAs are available for public inspection and copying at the Reference Information Center, Consumer and Governmental Affairs Bureau, Federal Communications Commission, 445 12th Street, SW, Washington, DC 20554.

(1) The 52 MEAs are composed of one or more EAs and the 12 REAGs are composed of one or more MEAs, as defined in the table below:

| REAGs                        | MEAs                                              | EAs                           |
|------------------------------|---------------------------------------------------|-------------------------------|
| 1 (Northeast) .....          | 1 (Boston) .....                                  | 1–3.                          |
|                              | 2 (New York City) .....                           | 4–7, 10.                      |
|                              | 3 (Buffalo) .....                                 | 8.                            |
|                              | 4 (Philadelphia) .....                            | 11–12.                        |
| 2 (Southeast) .....          | 5 (Washington) .....                              | 13–14.                        |
|                              | 6 (Richmond) .....                                | 15–17, 20.                    |
|                              | 7 (Charlotte-Greensboro-Greenville-Raleigh) ..... | 18–19, 21–26, 41–42, 46.      |
|                              | 8 (Atlanta) .....                                 | 27–28, 37–40, 43.             |
|                              | 9 (Jacksonville) .....                            | 29, 35.                       |
|                              | 10 (Tampa-St. Petersburg-Orlando) .....           | 30, 33–34.                    |
|                              | 11 (Miami) .....                                  | 31–32.                        |
| 3 (Great Lakes) .....        | 12 (Pittsburgh) .....                             | 9, 52–53.                     |
|                              | 13 (Cincinnati-Dayton) .....                      | 48–50.                        |
|                              | 14 (Columbus) .....                               | 51.                           |
|                              | 15 (Cleveland) .....                              | 54–55.                        |
|                              | 16 (Detroit) .....                                | 56–58, 61–62.                 |
|                              | 17 (Milwaukee) .....                              | 59–60, 63, 104–105, 108.      |
|                              | 18 (Chicago) .....                                | 64–66, 68, 97, 101.           |
|                              | 19 (Indianapolis) .....                           | 67.                           |
|                              | 20 (Minneapolis-St. Paul) .....                   | 106–107, 109–114, 116.        |
|                              | 21 (Des Moines-Quad Cities) .....                 | 100, 102–103, 117.            |
| 4 (Mississippi Valley) ..... | 22 (Knoxville) .....                              | 44–45.                        |
|                              | 23 (Louisville-Lexington-Evansville) .....        | 47, 69–70, 72.                |
|                              | 24 (Birmingham) .....                             | 36, 74, 78–79.                |
|                              | 25 (Nashville) .....                              | 71.                           |
|                              | 26 (Memphis-Jackson) .....                        | 73, 75–77.                    |
|                              | 27 (New Orleans-Baton Rouge) .....                | 80–85.                        |
|                              | 28 (Little Rock) .....                            | 90–92, 95.                    |
|                              | 29 (Kansas City) .....                            | 93, 99, 123.                  |
|                              | 30 (St. Louis) .....                              | 94, 96, 98.                   |
| 5 (Central) .....            | 31 (Houston) .....                                | 86–87, 131.                   |
|                              | 32 (Dallas-Fort Worth) .....                      | 88–89, 127–130, 135, 137–138. |
|                              | 33 (Denver) .....                                 | 115, 140–143.                 |
|                              | 34 (Omaha) .....                                  | 118–121.                      |
|                              | 35 (Wichita) .....                                | 122.                          |
|                              | 36 (Tulsa) .....                                  | 124.                          |
|                              | 37 (Oklahoma City) .....                          | 125–126.                      |
|                              | 38 (San Antonio) .....                            | 132–134.                      |
|                              | 39 (El Paso-Albuquerque) .....                    | 136, 139, 155–157.            |
|                              | 40 (Phoenix) .....                                | 154, 158–159.                 |